

App'l. No. 10/734,834
Amdt. Dated May 5, 2006
Reply to Office Action of November 14, 2005

Attorney Docket No. 81876.0059
Customer No.: 26021

REMARKS

This application has been carefully reviewed in light of the Office Action dated November 14, 2005. Claims 22-26 and 28-31 remain in this application. Claims 22 and 23 are the independent Claims. Claims 22 and 23 have been amended. It is believed that no new matter is involved in the amendments or arguments presented herein. Reconsideration and entrance of the amendment in the application are respectfully requested.

Specification Objection

The amendment filed February 22, 2005, was objected to under U.S.C. 132 for introducing new matter. In response, independent Claims 22 and 23 were have been amended, and the objected new matter have been deleted. Reconsideration and withdrawal of this objection are thus respectfully requested.

Non-Art Based Rejections

Claims 22-26 and 28-31 were rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement.

The Office Action cited the same subject matters as those cited in the § 132 objection. In response, independent Claims 22 and 23 have been amended, and the objected new matter has been deleted. Reconsideration and withdrawal of the above § 112 rejection are thus respectfully requested.

Art-Based Rejections

Claims 22-26 and 29-31 were rejected under 35 U.S.C. § 102(e) over Applicant's Prior Art (APR). APR was specified as Figures 1 and 4 of Specification. (*See, Office Action; Page 4, Para. 4*). Applicant respectfully traverses the rejections

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and submits that the claims herein are patentable in light of the clarifying amendments above and the arguments below.

The Claims are Patentable Over the Cited References

The present application is generally directed to a semiconductor apparatus having a charge pump which includes MOS type capacitors .

As defined by amended independent Claim 22, a driver for driving a load with a secondary power supply voltage obtained by stepping a primary supply voltage level uses a charge pump circuit that has a multiplicity of stages. Each of the stages includes a switching element and a capacitor. An associated capacitor of the first stage of the charge pump circuit is energized by the one of the voltages impressed on the capacitors of the multiplicity of stages that is closest in value to the primary supply voltage level. The associated capacitor has a voltage dependent capacitance under a given applied voltage and has a different structure, a low resistance, and a large area in comparison with at least one of the other capacitors of the subsequent stages.

The applied reference does not disclose or suggest the above features of the present invention as defined by amended independent Claim 22. In particular, APR does not disclose or suggest, "said associated capacitor has a voltage dependent capacitance under a given applied voltage and has a different structure, a low resistance and a large area in comparison with at least one of the other said capacitors of the subsequent stages," as required by that claim.

APR is described in "Background of the Invention" of the Specification. In paragraph 4, Page 2 of the Specification, it is set forth that:

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"Thus, in forming a charge pump circuit on one semiconductor chip together with a low-voltage circuit (not shown), their capacitors C1-Cn-1 are mostly MOS capacitors, aligned in shape and size with other MOS transistors. Such MOS capacitors are described in detail below with reference to FIGS. 2 and 3."

It is clear from above that APR discloses identical capacitors for the charge pump. Figures 2 and 3 illustrate a capacitor, which is used for all capacitors. APR is silent regarding the first stage capacitor having a lower internal resistance than the subsequent stages.

Accordingly, APR does not teach or suggest the above features of the present invention as recited in the independent Claim 22.

Since the cited reference fails to disclose, teach or suggest the above features recited in amended independent Claim 22, that reference cannot be said to anticipate or render obvious the invention which is the subject matter of the claim.

Accordingly, independent Claim 22 is believed to be in condition for allowance and such allowance is respectfully requested.

Applicant respectfully submits that amended independent Claim 23 is allowable for the least the same reasons as those discussed in connection with amended independent Claim 22.

The remaining claims depend either directly or indirectly from independent Claims 22 and 23, and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are therefore also believed to be in condition for allowance.

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Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6809 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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